



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification<sup>4</sup> :</b>  <b>A47G 1/20</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 88/ 02230</b>  <b>(43) International Publication Date:</b> 7 April 1988 (07.04.88)
<b>(21) International Application Number:</b> PCT/SE87/00412 <b>(22) International Filing Date:</b> 11 September 1987 (11.09.87)  <b>(31) Priority Application Number:</b> 8604014-4 <b>(32) Priority Date:</b> 23 September 1986 (23.09.86) <b>(33) Priority Country:</b> SE  <b>(71)(72) Applicant and Inventor:</b> GRUFMAN, Fredrik [SE/SE]; 13, Larsbergsvägen, S-181 38 Lidingö (SE). <b>(74) Agent:</b> FRIVALLI, Torsten; Skandinaviska patenbyrå, Box 6250, S-102 34 Stockholm (SE).  <b>(81) Designated States:</b> AT, AT (European patent), AU, BB, BE (European patent), BG, BR, CH, CH (European patent), DE, DE (European patent), DK, FI, FR (European patent), GB, GB (European patent),		HU, IT (European patent), JP, KP, KR, LK, LU, LU (European patent), MC, MG, MW, NL, NL (European patent), NO, RO, SD, SE, SE (European patent), SU, US.  <b>Published</b> <i>With international search report.</i> <i>In English translation (filed in Swedish).</i>
<b>(54) Title:</b> A METHOD AND DEVICE FOR FACILITATING HANGING OF PICTURES AND SIMILAR OBJECTS		
<b>(57) Abstract</b>  <p>A method and a device for correctly hanging pictures and similar objects. For the purpose a suspension means (4) is used which in the lower portion thereof has a hook (7) for suspending the picture at the suspension means and which in the upper portion thereof has an attachment for a suspension cord (5). At the rear side thereof the suspension means has one or several pointed portions (14) with ability of creating indentations in the wall when the suspension means is pressed thereagainst. By grasping the portion of the suspension cord which projects outside the picture with the hand and with the picture hanging in the hook of the suspension means (4) the picture is moved to the desired position whereupon a pressure is exerted upon the picture in direction towards the wall. The pointed portions of the suspension means will then generate indentations in the wall and by the aid of them the suspension means may upon hooking off the picture be fastened at the correct place. The suspension means is flat such that the picture will not be damaged when pressed against the wall.</p> <div> </div>		

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	FR	France	ML	Mali
AU	Australia	GA	Gabon	MR	Mauritania
BB	Barbados	GB	United Kingdom	MW	Malawi
BE	Belgium	HU	Hungary	NL	Netherlands
BG	Bulgaria	IT	Italy	NO	Norway
BJ	Benin	JP	Japan	RO	Romania
BR	Brazil	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	LI	Liechtenstein	SN	Senegal
CH	Switzerland	LK	Sri Lanka	SU	Soviet Union
CM	Cameroon	LU	Luxembourg	TD	Chad
DE	Germany, Federal Republic of	MC	Monaco	TG	Togo
DK	Denmark	MG	Madagascar	US	United States of America
FI	Finland				

## A METHOD AND DEVICE FOR FACILITATING HANGING OF PICTURES AND SIMILAR OBJECTS

5 If a picture is to be attractively exposed it is usually necessary that it is given a precise position in the room. In order to determine this optional position a person usually takes the picture in question and holds it in various positions while another person evaluates the various positions and finally decides where the hanging is to take place.

10 A disadvantage of such a method is that the person who holds the picture either hides the same or has to hold it at such a distance from himself that he only can hold it in the intended position for so short a time that the person who is to give his opinion has no time to form a real view of the various alternatives.

15 Another disadvantage is that one after having determined the best position has no possibility to position the hanging device with any degree of exactness in such a manner that the picture in fact will hang at the intended place. The picture usually has at its rear side a more or less slack cord extending between two attachment points and provided to be suspended by the hanging device. It is thus necessary to  
20 calculate where the hanging device has to be secured to give the picture the desired position but the result is in most cases unsatisfactory and in addition it is usually not possible to remove the hanging device and secure it at another place and to this is added the disadvantage that an incorrectly positioned hanging device leaves traces  
25 which although temporarily hidden by the picture of course are not desirable.

The primary object of the invention thus has been to eliminate these drawbacks

30 A further object has been to provide a device which is cheap to produce and simple in use.

To accomplish these and further objects the invention has the charac-

teristics of the appended claims.

The accompanying drawing illustrates two exemplary embodiments of the invention in which

Fig. 1 shows a stage in the hanging procedure whereas

5 Fig. 2 shows in a front view a hanging hook for bringing the invention into practice and

Fig. 3 is a section along line III-III in fig. 2

Fig. 4 shows the hanging hook according to figs 2-3 in a perspective view and

10 Fig. 5 finally shows a second embodiment of the hanging hook in a perspective view.

According to the invention the picture is hung upon a hook which forms part of a suspension means to which is separably connected a suspension element which with one portion thereof extends outside the picture and which can be held by the aid of said portion and by means of  
15 said suspension element the picture is moved to a desired position upon the wall and while the suspension element is held in the chosen position the picture is pressed against the wall at which time points or other means provided at the rear side of the suspension means and  
20 which when the suspension means is pressed against the wall brings forth a marking for the later fastening of the suspension means to the wall and/or a temporary fastening by means of the pressure acting through the picture will bring forth said marking or temporary fastening whereupon the picture preferably after removal of the suspension  
25 element is hooked off the hook of the suspension means and the suspension means is fastened to the wall by the aid of the markings or the temporary fastening.

According to the invention a suspension means is used which is designed to hold the cord, loop or the like which for hanging the picture is  
30 secured to the rear side thereof and further has marking and/or securing elements which are so designed that they upon pressing the suspension means against the wall to which the picture is to be attached

will give a visible marking and/or a securing of said suspension means and to the suspension means is separably connected a suspension element which has such an extension that it during the positioning extends outside the picture such that it can be held outside the same.

5 In fig. 1 the numeral 1 designates a picture which in a manner known per se has at the rear side thereof two attachment points 2a, 2b for a cord 3. A suspension means generally designated as 4 is shaped as a hook for suspending the cord 3 and to said suspension means there is in a separable manner attached a suspension cord 5. The suspension  
10 means 4 is so designed that it when pressed against the underlayer, i.e. the wall will create a marking or a securing notch.

After having placed the suspension means 4 in accordance with fig. 1 such that it suspends the picture and aligned it so as to hang straight in the suspension cord 5 one brings the picture into the  
15 intended position by holding it in the suspension cord or a handle attached thereto.

It is evident that one then does not hide the picture and is in a position to move it vertically as well as horizontally. When the best position has been found it is only necessary to press the picture against  
20 the wall. By this action also the suspension means will be pressed against the wall and the desired marking takes place.

After having hooked the picture off the suspension means and preferably after having removed the cord 3 one secures the suspension means at the marked place and the picture may then be hung and it will then  
25 hang exactly at the desired place. According to the invention the suspension means is thus so designed that it forms a marking as well as a hanging hook.

In figures 2-4 inclusive such a suspension means is shown. This one is preferably made from a plastic material in an injection moulding process and includes a planar attachment portion 6 from the lower part  
30 of which extends a hook 7 and which has one or several fastening holes 8 and 9, respectively for fastening nails 10 or the like. In

order to achieve an effective fastening action said fastening holes may be inclined according to figures 3 and 4.

5 A wider fastening hole 11 may further be arranged for fastening also heavy objects. The upper portion of the suspension means 4 is as appears from the figures thickened but is penetrated by a vertical slot 12, which at the lower portion thereof continues in a widened recess 13. Extending from the rear side of the attachment portion 6 are one or several pointed portions 14.

10 As appears from fig. 2 the suspension cord 5 is attached to the suspension means by being provided with a knot 5' and is thereupon introduced into the slot 12 with the knot housed in the recess 13. If ~~the suspension means has been made from a hard plastic material~~ such as acetal plastic the points 14 will create visible markings also in relatively hard walls but it may of course also be necessary to use  
15 steel pins or the like instead of such points.

The intended marking may however also be achieved in another way, for instance by providing the suspension means 4 at the rear side thereof with a field which when pressed against the wall will give a colour marking, by providing ~~at the rear side thereof a self-adhering tape~~  
20 ~~which upon pressing the suspension means against a wall initially~~ secures the suspension means to the wall or the like.

It is also obvious that the suspension cord may be provided with a handle or the like and that it may be replaced by for instance a thin  
25 ~~strip, which may be so stiff that it can suspend the picture also without~~ having the picture hanging down therefrom.

Also other means separable from the suspension means may be used to replace the suspension cord.

30 In many instances ~~it is sufficient to provide one single point or marking~~ means 14 of some other kind for the marking. Especially when the marking means comprises a point which creates a minor indentation in

the wall and the suspension means is to be positioned such that this point during fastening the suspension means to the wall is to be received in said indentation it may in some cases be difficult to "feel in" the correct position. In such cases it is advisable to position the point or the like such that the marking produced therefrom may be observed visually during fastening of the suspension means. This is accomplished in the simplest manner when the point or points are located at the upper edge of the suspension means.

One or several of the nails designed for fastening the suspension means to the wall may be driven into the suspension means by friction and have the points thereof somewhat projecting from the rear side of the suspension means and said projecting points may in certain cases replace or complete the points 14 in their marking function.

Since the pressure, which is to bring forth the markings or the temporary fastening of the suspension means is primarily exerted upon the picture and the suspension means in many instances will be located at a fragile portion of the picture it is of importance that said pressure can not cause any damage to the picture. For this reason the suspension means 4', which is shown in fig. 5, is substantially flat and has a circular fastening portion 6' from which via upper and lower web portions perpendicular to said fastening portion extend upper and lower arcuate upper and lower portions which are parallel to the fastening portion and from which the lower one 15 together with said lower web portion constitutes the suspension hook 7' whereas the upper arcuate portion 16 together with the upper web portion and the fastening portion constitutes a pocket for receiving the knot of the cord 5. Extending through the arcuate portion 16 and the web portion thereof are further the fastening holes 8' as well as a through hole through which the cord 5 passes. The upper surfaces of the arcuate portions 15 and 16 respectively then are located in a common plane parallel to a plane through the oppositely situated surface of the attachment portion.

## CLAIMS

1. A method for hanging pictures and similar objects, characterized in that the picture (1) is hung upon a hook (7) forming part of a suspension means (4) to which has been separably connected a suspension element (5) which with one portion thereof extends outside the picture and can be held by said portion, that the picture by aid of said suspension element is moved to the desired position on the wall and while the suspension element is held in the chosen position is pressed against the wall such that points (14) or similar elements provided at the rear side of the suspension means and being provided to bring forth upon pressing the suspension means against the wall a marking for later fastening of the suspension means to the wall and/or a temporary fastening of said suspension means by aid of the pressure transferred through the picture will bring forth said marking or temporary fastening whereupon the picture is hooked off the hook (7) of the suspension means (4) and the suspension means preferably after removal of the suspension element (5) is fastened to the wall by aid of the markings or the temporary fastening.
2. A device for bringing the method according to claim 1 into practice, characterized in that it comprises a suspension means (4) which is designed so as to hold the cord, eye or the like which is provided at the back of the picture for hanging the same as well as marking and/or fastening elements (14,10) which are so designed that they when the picture and as a consequence thereof also the suspension means is pressed against the wall to which the picture is to be attached will give a visible or elsewhere registerable marking or fastening of said suspension means and that a suspension element (5) is separably connected to the suspension means and has such an extension that it during the positioning projects outside the picture such that it can be held and operated outside the picture.
3. A device according to claim 2, characterized in that the suspension means (4) comprises a picture hook preferably made from plastic material and in the upper portion thereof being shaped (12,13) for detachably holding a suspension element in the form of a strip or



cord (5) and having at the rear side thereof points or other projections which are so designed that they upon pressing the suspension means against the wall will generate one or several indentations therein.

5 4. A device according to claim 2, characterized in that the suspension means has colour emitting portions, tape strips or the like which when the suspension means is pressed against the wall will bring forth a marking on the wall in the shape of one or several by means of colour or tape marked areas.

10 5. A device according to claim 2, characterized in that the suspension means has an adhesive layer for instance in the shape of a double-side-adhesive tape which when the suspension means is pressed against the wall will bring forth at least a temporary fastening of the suspension means to the wall.

15 6. A device according to claim 2, characterized in that the screws or nails intended to fasten the suspension means to the wall during positioning are so fixed to the suspension means that the points thereof somewhat project from the rear side of the suspension means such that they when the latter is pressed against the wall will bring forth markings in the wall.

20 7. A device according to claim 2, characterized in that the suspension means (4) in the upper portion thereof has a vertical slot (12) or recess which continues in a recess (13) which is so designed that it may receive a knot (5') of a cord (5) for detachably connecting the suspension means to said cord.

25 8. A device according to claim 2, characterized in that the marking elements (14) are so located, preferably at the upper edge of the suspension means (4) that the markings produced thereby may be visually registered until the suspension means has been moved substantially to the intended position.

30 9. A device according to claim 2, characterized in that the suspension means (4') is substantially flat such that the pressure

between the picture and the suspension means which is generated when the picture is pressed against the wall will be taken up by a relatively large, substantially planar surface.

- 5 10. A device according to claim 9, characterized in that the suspension means (4') is substantially circular with hook shaped means extending from two diametrically opposed portions and having arcuate portions (15,16).

Fig. 1

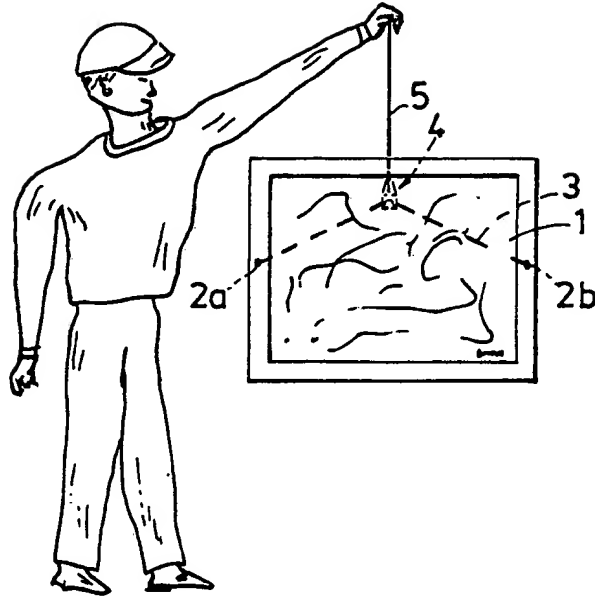


Fig. 2

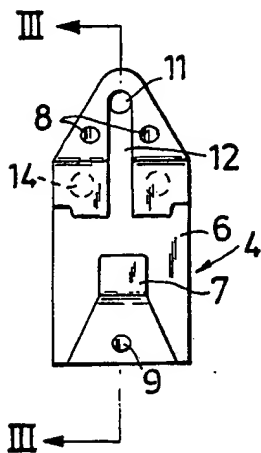


Fig. 3

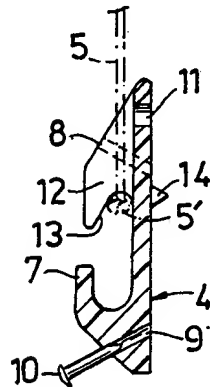


Fig. 4

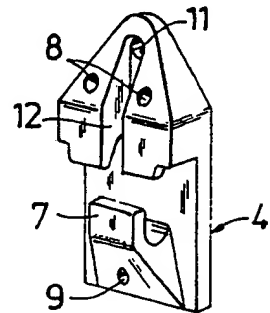
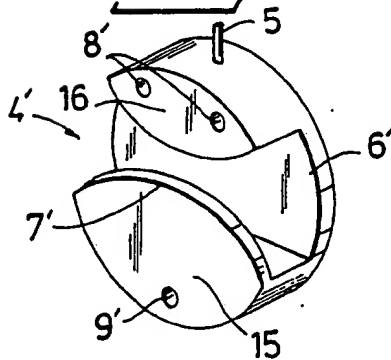


Fig. 5



# INTERNATIONAL SEARCH REPORT

International Application No PCT/SE87/00412

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) * According to International Patent Classification (IPC) or to both National Classification and IPC 4 <div style="text-align: center; margin-top: 10px;">A 47 G 1/20</div>											
<b>II. FIELDS SEARCHED</b> <div style="text-align: center; margin-top: 10px;">Minimum Documentation Searched 7</div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th style="width: 30%;">Classification System</th> <th style="width: 70%;">Classification Symbols</th> </tr> <tr> <td>IPC</td> <td>A 47 G 1/20</td> </tr> <tr> <td>Nat C1</td> <td>34f: 3/01-/04</td> </tr> <tr> <td>US C1</td> <td>24: 230, 5; 248: 467, 487, 495, 497</td> </tr> </table> <div style="text-align: center; margin-top: 10px;">Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched *</div> <div style="text-align: center; margin-top: 20px;">SE, NO, DK, FI classes as above</div>			Classification System	Classification Symbols	IPC	A 47 G 1/20	Nat C1	34f: 3/01-/04	US C1	24: 230, 5; 248: 467, 487, 495, 497	
Classification System	Classification Symbols										
IPC	A 47 G 1/20										
Nat C1	34f: 3/01-/04										
US C1	24: 230, 5; 248: 467, 487, 495, 497										
<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT *</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of Document, 11 with indication, where appropriate, of the relevant passages 12</th> <th style="width: 20%;">Relevant to Claim No. 13</th> </tr> <tr> <td style="text-align: center; vertical-align: top;">X</td> <td>CH, A, 131 991 (HANS HÄFLIGER) 1 June 1929</td> <td style="text-align: center; vertical-align: top;">1-10</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">X</td> <td>WO, A1,80/00785 (EISEN HARRY) 1 May 1980 &amp; GB, 2042886 US, 4220309</td> <td style="text-align: center; vertical-align: top;">1-10</td> </tr> </table>			Category *	Citation of Document, 11 with indication, where appropriate, of the relevant passages 12	Relevant to Claim No. 13	X	CH, A, 131 991 (HANS HÄFLIGER) 1 June 1929	1-10	X	WO, A1,80/00785 (EISEN HARRY) 1 May 1980 & GB, 2042886 US, 4220309	1-10
Category *	Citation of Document, 11 with indication, where appropriate, of the relevant passages 12	Relevant to Claim No. 13									
X	CH, A, 131 991 (HANS HÄFLIGER) 1 June 1929	1-10									
X	WO, A1,80/00785 (EISEN HARRY) 1 May 1980 & GB, 2042886 US, 4220309	1-10									
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>* Special categories of cited documents: 10</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 48%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&amp;" document member of the same patent family</p> </div> </div>											
<b>IV. CERTIFICATION</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 50%; padding: 5px;">           Date of the Actual Completion of the International Search  <div style="text-align: center; margin-top: 10px;">1987-11-30</div> </td> <td style="width: 50%; padding: 5px;">           Date of Mailing of this International Search Report  <div style="text-align: center; margin-top: 10px;">1987 -12- 0 1</div> </td> </tr> <tr> <td style="width: 50%; padding: 5px;">           International Searching Authority  <div style="text-align: center; margin-top: 10px;">Swedish Patent Office</div> </td> <td style="width: 50%; padding: 5px;">           Signature of Authorized Officer  <div style="text-align: center; margin-top: 10px;">               Agneta Änggård           </div> </td> </tr> </table>			Date of the Actual Completion of the International Search <div style="text-align: center; margin-top: 10px;">1987-11-30</div>	Date of Mailing of this International Search Report <div style="text-align: center; margin-top: 10px;">1987 -12- 0 1</div>	International Searching Authority <div style="text-align: center; margin-top: 10px;">Swedish Patent Office</div>	Signature of Authorized Officer <div style="text-align: center; margin-top: 10px;">               Agneta Änggård           </div>					
Date of the Actual Completion of the International Search <div style="text-align: center; margin-top: 10px;">1987-11-30</div>	Date of Mailing of this International Search Report <div style="text-align: center; margin-top: 10px;">1987 -12- 0 1</div>										
International Searching Authority <div style="text-align: center; margin-top: 10px;">Swedish Patent Office</div>	Signature of Authorized Officer <div style="text-align: center; margin-top: 10px;">               Agneta Änggård           </div>										